(No Model.)

C. HESS & H. R. HUTCHINS.

MACHINE FOR DAMPENING SHEETS OF PAPER.

No. 598,628. Patented Feb. 8, 1898.

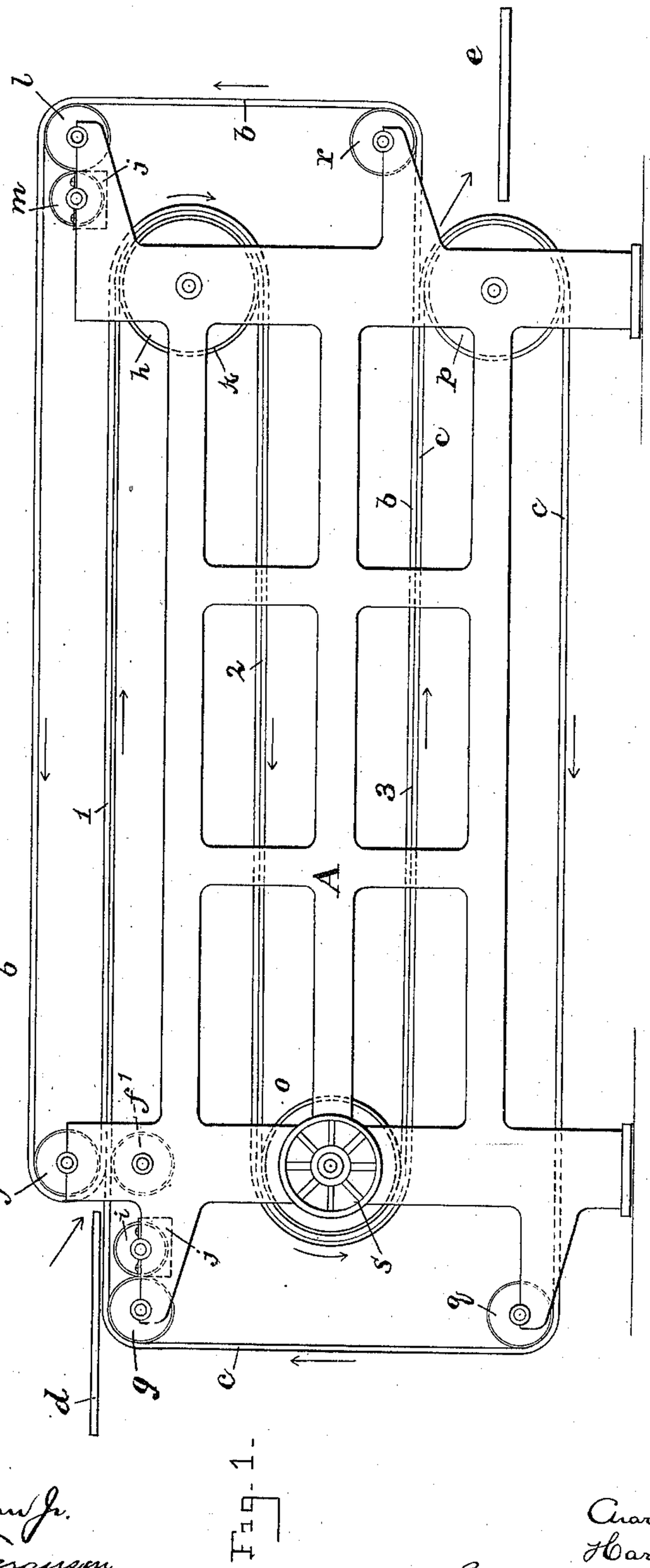

Fig. 1.

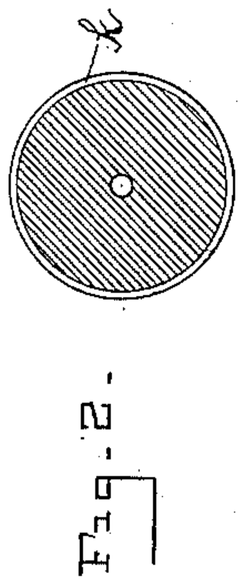

Fig. 2.

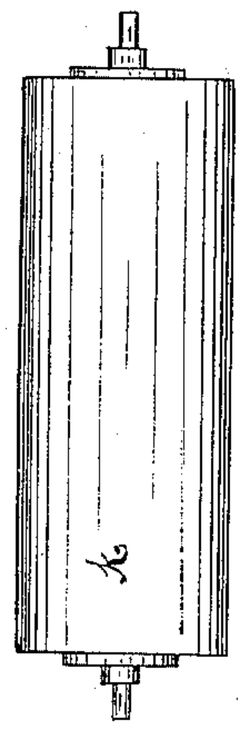

Fig. 3.

WITNESSES

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CHARLES HESS AND HARRY R. HUTCHINS, OF BALTIMORE, MARYLAND.

MACHINE FOR DAMPENING SHEETS OF PAPER.

SPECIFICATION forming part of Letters Patent No. 598,628, dated February 8, 1898.

Application filed April 5, 1897. Serial No. 630,689. (No model.)

To all whom it may concern:

Be it known that we, CHARLES HESS and HARRY R. HUTCHINS, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Machines for Dampening Sheets of Paper, of which the following is a specification.

This invention relates to a machine for dampening sheets of paper preparatory to taking impressions from lithographic stones.

The object of the invention is to provide a machine with two endless belts which shall travel with a continuous movement and in two or more stretches in contact with each other and both pass over the same rollers, said belts to be made of a material that possesses the property of absorbing water. With a machine of this character paper that is designed for printing or lithographic presses may be run through the endless belts and thereby be properly dampened.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved machine. Figs. 2 and 3 are views of one of the rollers.

The machine-frame may be made of any suitable material, but we prefer to employ two cast-iron sides A, placed upright and the two connected by suitable cross-beams secured between them. Of course the size and proportions of these parts may be varied, but Fig. 1 of the drawings is made to a scale that in practice gives good results.

Two endless belts *b c*, of felt, are run over rollers, so as to form a plural number of stretches 1 2 3, that are in contact with each other. The belts being wet it will be seen that sheets of paper laid between the said two wet belts will be dampened on both sides.

The letter *d* designates a table to contain the dry paper, and *e* a table to receive the paper sheets that have been dampened.

The two endless belts are stretched alike over rollers. The belt *b* passes over a roller *f* at one end of the machine and which is the feeding-in point and immediately below which is another roller *f'*. The belt *c* also passes over a roller *g* near the same point and over the said lower feeding-in rollers *f'*. From this feeding-in point both belts are in contact and form the first stretch 1 to the roller *h* at the opposite end of the machine. The lower belt *c* is dampened or wet by the roller *g*, running in contact with the water-roller *i*, which turns in a trough or vessel *j* containing water. It may be remarked that all the rollers have a covering of felt *k*. The upper belt *b* at the end of the machine opposite the feeding-in point runs over a roller *l*, which is kept wet by a contact-roller *m*, revolving in another water trough or vessel *j*. At the end of the first stretch 1 both belts run over the roller *h*. Then the second stretch 2 is formed, and both belts run over another roller *o* at the feeding-in end of the machine, and the third stretch 3 is then formed, and the delivering of the sheets takes place at the end of this stretch onto the table *e*. The lower belt *c* passes over the roller *p* adjacent the delivering-table, then under roller *q* at the feeding-in end of the machine, and up to the roller *g* already described. The upper belt *b* at the end of the third stretch passes under roller *r* at the feeding-in end of the machine and then up to the roller *l* previously named.

It will be seen the sheets are fed in between the two belts in the direction indicated by the darts, and the two belts are pressed together at this point by the two rollers *f f'*. The two belts both pass over the compression-roller *h* and also the compression-roller *o*. Consequently the sheets of paper between the belts will at these two points be compressed, and the dampness will be thoroughly absorbed into the paper.

The driving-pulley *s* is affixed to the shaft of the roller *o*.

The paper dampened by the operation of this machine will be dampened uniformly both sides alike and each sheet like every other sheet.

Having thus described our invention, what we claim is—

A machine for dampening sheets of paper, having in combination a table to contain the dry sheet-paper; a table to receive the damp sheet-paper; a frame at one end of which is a compression-roller, *h*, at the opposite end a second compression-roller, *o*; and two endless absorbent belts having the first part of

their contact or feeding-in point adjacent said dry-sheet table, and said two belts traveling in contact with each other and forming three straight stretches, 1, 2, 3, and both belts passing together over the said two compression-rollers, *h*, *o*, and separating their contact adjacent the damp-paper table, as set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES HESS.
HARRY R. HUTCHINS.

Witnesses:
CHARES B. MANN, Jr.,
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